

in the development of civilisation of the influence exerted by the contact of peoples and the diffusion of culture. When he recognised that the germs of the megalithic culture of Melanesia had been introduced from the west it was clear that the immediate problem for investigation was to determine whether the Malay Archipelago, the scattered islands of which convert the great waterway linking the Indian and Pacific Oceans into a sort of sieve, had preserved any records of the earliest of the cultural streams which must have been filtering through it for twenty-five centuries. He therefore recommended Mr. W. J. Perry (who had been sent by Dr. A. C. Haddon to seek his advice as to the choice of a subject for investigation in ethnology) to learn the Dutch language and to search the voluminous, though scattered, literature of Indonesian ethnology for any evidence of the easterly diffusion of megalithic culture.

The book before us is the first substantial instalment of the results of this investigation; and it is certain to become a landmark in the history of ethnology. For it represents a noteworthy advance in the process of introducing the true methods of exact science into a domain of knowledge which for fifty years has been rendered increasingly chaotic by the misuse of biological terms and the misunderstanding of psychology.

An incursion into this maze of confusion by a man fresh from the severe discipline of the Mathematical Tripos might be expected to produce surprising results—and this expectation is fully justified in Mr. Perry's book. For he has impartially collected all the available facts, and based his explanation of them on the evidence they provide, without attempting to force them into any ready-made scheme, such as Waitz, Bastian, and Tylor have constructed, or to evade the issues so raised by taking refuge behind the blessed phrases "animism," "totemism," "intertribal barter," "sympathetic magic," "similarity of the working of the human mind," or any of the other catchwords that the modern ethnologist has been taught to use as substitutes for inquiring into the real meaning of things.

Mr. Perry was able not only to realise Dr. Rivers's expectations by finding the megalithic culture-complex in Indonesia, but he has also made wholly unexpected discoveries of far-reaching importance to the student of human nature and for the interpretation of the history of civilisation of the whole world.

With quite exceptional skill and insight he has been able to discover a pathway through the amazing jungle of Indonesian customs and beliefs, and to arrive at certain general conclusions which are of fundamental importance.

The most striking of these generalisations is the recognition of the fact that the irregular distribution of megalithic monuments is explained by their association with the localities where ancient gold-mines or pearl beds are found. This discovery made it plain that it was the search for special forms of wealth which attracted ancient miners and pearl-divers to certain places, and not to

others, in Indonesia (and throughout the world). These immigrants introduced a distinctive group of customs and beliefs wherever they settled—not merely peculiar methods of burial, but also terraced cultivation and irrigation, a system of chieftainship and a priesthood, the belief in a sky-heaven, habits of warfare and head-hunting, and a host of other peculiar practices which will enable the investigator to determine whence the wanderers came and the dates of the diffusions of culture of which they were the bearers.

But the magnitude of Mr. Perry's achievement is not to be measured merely by his demonstration of the motives which prompted the spreading abroad of the elements of civilisation twenty-five centuries ago and his explanation of the geographical distribution of certain phases of culture. The searching analysis in his book reveals the fact that before the coming of the stone-using people the indigenous population of Indonesia was leading an unexpectedly simple and idyllic life and contentment singularly free from a ^{ment}play of inventiveness. It sheds a new light upon the factors which determine material and intellectual progress and upon the meaning of civilisation.

The work of Dr. Rivers and Mr. Perry is transforming ethnology from an incoherent jumble of fairy tales into a real science.

G. ELLIOT SMITH.

WAR WORK OF THE BRITISH MEDICAL SERVICES.

British Medicine in the War, 1914-17. Being Essays on Problems of Medicine, Surgery, and Pathology arising among the British Armed Forces engaged in this War, and the Manner of their Solution. Collected out of the *British Medical Journal*, April-October, 1917. (London: British Medical Association, 1917.) Price 2s. 6d.

THIS reprint of collected papers from the *British Medical Journal* is of very great interest, demonstrating as it does the rapid progress made in the medical services of the Navy and Army during the war. Although the articles were published at various dates between April and October, 1917, the methods described in some instances prove less than a year later to be only of historical interest: conditions and disease problems are discussed which are no longer confronting the armies in the field. The editor's preface eloquently directs the reader's attention to these points, so that we never lose sight of the view that medicine and surgery in this war are not, and cannot be allowed to become, stationary. Used as a guide and handbook of practice in the field, this collection of articles would soon be found out of date, but, carefully read, one can trace clearly the landmarks on the road that has been traversed.

The medical departments of the Navy and Army have, fortunately, been characterised by broad-minded elasticity. Innovations have been wel-

comed and powers of adaptation displayed by the authorities which had scarcely been anticipated. This volume contains many articles which demonstrate the encouragement given to new ideas and new methods. A public which was shocked by the revelations from Mesopotamia will turn with relief and satisfaction to this story of constant improvements in treating wounds and dealing with disease. Perhaps barely sufficient justice is done to the administrative officers of the medical services, upon whom falls the ultimate burden of almost daily reorganisation in order to give effect to improvements and discoveries brought under their notice.

The remodelling of casualty clearing stations into first-rate surgical units is an outstanding example of the revolutions necessary and possible during the war. An admirable description of this development is given in chap. vi. ("The Development of British Surgery at the Front") by Major-Gens. Sir A. Bowlby and C. Wallace.

In *cap. v.* ("Medicine and the Sea Affair") graphic accounts are given of how the sick and wounded are handled in the Navy. The illustrations in this chapter are particularly good, and help the reader to appreciate a side of the war which few have seen. Fleet-Surgeon R. C. Munday, R.N., has contributed a most readable paper on hygiene, dealing, *inter alia*, with that most difficult problem, the ventilation of warships.

Chap. iv. ("Bio-chemistry and War Problems") lifts for us a corner of the curtain, revealing a wonderland of science and infinite fields of experiment and research beyond. Dr. H. D. Dakin can only touch on the fringe of his subject, but on all sides it is admitted that through bio-chemistry lies the road to further progress. In no branch of warfare have chemists, physicists, and physiologists played a more valuable part than in that connected with poisonous gases. At present, for obvious reasons, "Gas Warfare" cannot be discussed in detail. Hence the very high grade of scientific work that is being done in this direction must of necessity be almost unknown to the public.

Chap. viii. ("Military Orthopædic Hospitals"), by Dr. W. Colin Mackenzie, reminds us of one of the principal needs of the wounded soldier. Brilliant operations at the front which save lives and limbs are invested with a glamour of their own. There is, however, an immense branch of surgery carried on out of the limelight which is worthy of the increasing attention it is now receiving.

The name "orthopædic" is unfortunate in itself. Few medical readers and fewer still amongst non-medical readers realise all that the term implies. Briefly, "orthopædic surgery" includes every possible operative and other device which is designed to restore function in injured parts. This chapter is well worth reading, none the less so because the history of orthopædic surgery is the history of a branch of surgery entirely British in its origin. The importance of "orthopædics" will continue long after the war, when "war-

surgery," properly so-called, is being forgotten without regrets.

Chap. xiii. ("The Part Played by British Medical Women in the War") may be remarkable to some readers who have not had the opportunity of witnessing at first hand the increasing importance of women in medicine and surgery. Gradually, as it becomes obvious that a man's proper place is in the fighting line, the anomaly of a woman taking charge of the sick and wounded is, in fact, less striking than the anomaly of a man occupied thus instead of in fighting. The chapter on the R.A.M.C. and its work (including a short paper on the Canadian Army Medical Service) is graphically written and well illustrated. With the increase in air activity, and especially since the bombing of medical units and hospitals seems to have become an integral part in the German art of war, the illustrations and descriptions already require modification in many details.

One outstanding omission there is in this volume—namely, the dental services. The dental services of the C.A.M.C. are shortly described, and their immense value in saving sick wastage rightly insisted upon. Is all mention of the R.A.M.C. dental services omitted because they have not been developed and their potentialities recognised?

OUR BOOKSHELF.

Wireless Telegraphy and Telephony: A Handbook of Formulae, Data, and Information. By Dr. W. H. Eccles. Second edition, revised and enlarged. Pp. xxiv+514. (London: Benn Bros., Ltd., 1918.) Price 22s.

THIS book is written mainly for the technical expert, but the amateur who dips into it will find much to interest him. The theories hitherto advanced to explain the transmission of "wireless" signals are by no means complete, and some of them are very far from convincing. It is satisfactory, therefore, to notice that the author adopts generally a neutral attitude. In few industries is there greater scope for theoretical speculation, or a more crying need for it. The operator listening to the mysterious sounds sometimes heard in the telephone of his receiving apparatus, due often to cosmical influences, has every incitement to find out their causes.

In the second edition of his book the author has made some interesting additions. We have noticed descriptions of Heyland's alternator, of the oscillion telephone and telegraph transmitter for aeroplanes, and of the Darien system of the United States Navy. The author acknowledges his debt to the Proceedings of the American Institute of Radio Engineers, to which society practically every wireless expert belongs. We have also noticed an interesting account of the upper atmosphere. A useful glossary of technical terms is included. We learn, for example, that "radio-phare" is a radio-telegraphic lighthouse which aids navigation by emitting characteristic signals. By estimating the bearings of two charted radio-